

# Southern Lakes Enhancement Concepts



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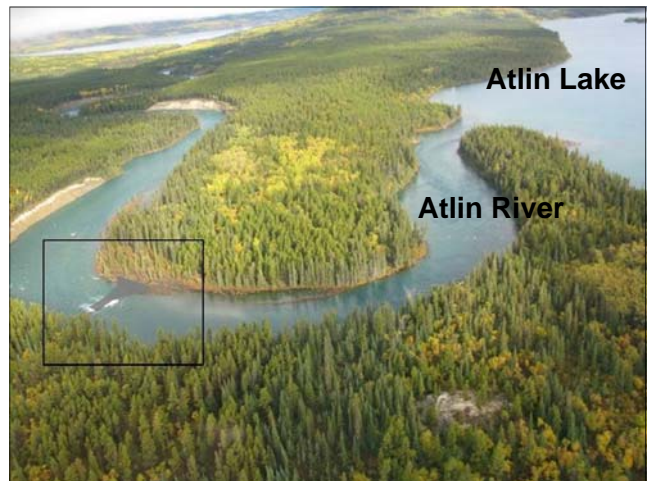
## Planning for the Future

Yukon Energy is planning for the territory's future energy needs, and we're committed to meeting the growing demand for electricity using clean energy that complements our existing hydro system. We feel it is our obligation to ensure, as much as possible, that the power we produce is from renewable sources. We believe that Northerners have a collective interest in keeping the environment clean.

To this end, Yukon Energy is looking at all possible sources of renewable energy, including geo-thermal, wind, and the enhancement of our existing hydro assets. We are interested in exploring with you two concepts for increasing the hydro-electrical generation potential at Yukon Energy's Whitehorse plant. These two concepts would involve increased winter storage on both Marsh Lake and Atlin Lake.

### Atlin River

The first idea involves putting a submerged weir in the Atlin River, to retain water in Atlin Lake in the fall for release in the winter, when we need the water the most. Yukon electrical loads are highest during winter months when we have lower flows in the Yukon River. Without sufficient water, we must use diesel fuel to generate electricity. By storing water for winter usage, Yukon Energy could increase the amount of hydro electricity we produce, displacing up to 4.8 million litres of diesel per year. This translates into a savings to Yukoners of \$4.8 million per year in diesel costs and it would avoid the production of up to 12,000 tonnes of greenhouse gas emissions annually.



*Conceptual drawing of submerged weir on Atlin River*

Yukon Energy is exploring the concept of regulating the water flows on Atlin River, while keeping Atlin Lake levels within their natural range. Lake levels would not be raised above what they are now during the summer months. Instead, what is being contemplated is to hold the fall water levels a bit longer into the winter and then allow them to drop over the balance of the winter months. The idea currently being contemplated is to use a submerged weir to hold back the water in the fall.

No decision has been made to proceed with any regulation of the Atlin River. We are committed to regular and meaningful discussions with the Taku River Tlingit, Atlin Community Improvement District, the residents of Atlin, the B.C. government and other interested groups and individuals. We are interested in working with you to determine how you would like to be involved in this process, and to address your questions or concerns.

## Marsh Lake

This concept involves holding back water in Marsh Lake longer in the fall, so it could be used during the winter months when we need it the most. During flood years, there would be no change to operations until after the high water levels have subsided. The water would be used to increase the amount of power produced at the Whitehorse plant during the winter.

Yukon Energy had previously decided to remove this idea from our 20-Year Resource Plan. However our regulator, the Yukon Utilities Board, sees this as a good potential project and has asked us to give it further consideration. It would save Yukoners up to \$2 million per year by displacing 2.1 million litres of diesel annually and would reduce greenhouse gas emissions by 5,000 tonnes a year.

As in the case of the Atlin River, no decision has been made to proceed with any changes to Marsh Lake water regulation. We are committed to working with Marsh Lake and Tagish residents, the Carcross-Tagish First Nation and other affected First Nations, and all other interested groups and individuals to address questions and concerns and determine how best to proceed.



*Lewes River Control Structure near Marsh Lake*

## How You Can Be Involved

A great deal of discussion, research and planning must take place before Yukon Energy makes a decision about whether to proceed with a project. We are involving you in the early planning stages. There will be opportunities throughout the process for you to provide input and to ask questions. We welcome your involvement.

**Phase 1:** Define what the project might look like (the concept stage), and gather information/ conduct feasibility and environmental studies. Engage governments, stakeholders and the public.

**Phase 2:** Work with governments, stakeholders and the public to refine the concept and analyze what the impacts would be.

**Phase 3:** Prepare and submit documents for environmental and/or regulatory review. Documents will reflect public input to date.

**Phase 4:** Obtain all necessary permits, licenses and other authorization. Assessment and regulatory authorities take public input into account when granting or denying permits.

**Phase 5:** Tender construction work. Make final decision about whether to proceed with construction.

## Contact Us

Yukon Energy is committed to sharing as much information as possible with local residents about these two potential projects. If you wish to be added to an email list to receive regular updates or if you have questions and concerns, please contact (867) 393-5333 or [communications@yukonenergy.ca](mailto:communications@yukonenergy.ca).

Also watch our website at [www.yukonenergy.ca](http://www.yukonenergy.ca) for more information.